General Information on the VATT

Optical System: aplanatic Gregorian, f/9

Focal Length: 16.48 m

Primary Mirror: f/1.0, Diameter 1.83 meters Secondary Mirror: f/0.9, Diameter 0.38 meters Back Focal Distance: 50.80 mm (effective)

Vignetting-Free Field: 72 mm diameter (15 arcmin)

Image Scale: 12.52 arcsec/mm

Image quality: 0.1 arcsec throughout 6.8 arcmin diameter flat FOV

Mount: altitude-azimuth with derotator

Geographical Location of VATT

Latitude: 32° 42' 04.69" N Longitude: 109° 53' 31.25" W

Altitude: 3191 meters

Driving time from Tucson: 3.5 hours in good conditions

IAU Observatory Code number: 290

Sky Conditions at VATT

The sky surface brightness for low-airmass (sec z < 1.2) observations averaged 22.00, 22.53, 21.49, and 20.88 mag arcsec2 in U, B, V, and R, respectively. These were measured during relatively high solar activity. The darkest run achieved 21.72 in V, close to theoretical minimum of 22.0 mag arcsec2.

The FWHM seeing for median R-band focus images per run ranged from 0.97" to 2.15", with values occasionally as low as 0.65". While this is very good, please note that the VATT's height and location do not give the best seeing achievable at MGIO.

(These values were determined by Violet Taylor, ASU)

Computer Systems at VATT

HP Server System and Terminals running on a 1 gigabit private network with a TCP/IP link to the Steward Obs. network via microwave connection

VME instrument computer running VxWorks

Linux for TCS interface, Xephem utility, and autoguider control

IRAF reduction software and AzCam data aquisition software

Last update: 2023/04/25 21:21

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